

## AMENDMENTS TO THE CLAIMS

The following is a listing of claims that replaces all prior versions, and listings, of claims in the application:

1. (Previously Amended): An isolated nucleic acid sequence encoding a protein comprising amino acids 1 to 357 of SEQ ID NO:1.

### **Claim 2 (Currently Cancelled).**

### **Claim 3 (Previously Cancelled).**

4. (Currently Amended): An isolated nucleic acid sequence ~~of claim 1, wherein the nucleic acid encodes~~ encoding SEQ ID NO:1.

5. (Currently Amended): An isolated nucleic acid sequence ~~of claim 1, wherein the nucleic acid sequence has a~~ comprising nucleotide sequence of SEQ ID NO:2.

### **Claim 6 (Previously Cancelled).**

7. (Currently Amended): The An isolated nucleic acid sequence ~~of Claim 1 encoding a protein comprising amino acids 1 to 357 of SEQ ID NO:1, said isolated nucleic acid sequence~~ comprising sequence 5' GATATTCCACCGCCCCGACAT 3' (SEQ ID NO:8) that is complementary to 5' ATGTCGGCGGTGGAAATATC 3' (SEQ ID NO:3), or comprising sequence 5' TGAAAACAGCGAAGCAGGAATTC 3' (SEQ ID NO:9) that is complementary to 5' GAATTCTGCTTCGCTGTTTCA 3' (SEQ ID NO:4), wherein said isolated nucleic acid sequence encodes a protein having plus end-directed microtubule motor activity.

8. (Previously Amended): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is isolated from a hyphal fungus.

9. (Previously Amended): The isolated nucleic acid sequence of Claim 8, wherein said fungus is *Thermomyces lanuginosus*.

**Claim 10 (Previously Cancelled).**

11. (Previously Amended): An expression vector comprising the nucleic acid sequence of Claim 1.

**Claim 12 (Currently Cancelled).**

13. (Original) A host cell transfected with the vector of claim 11.

**Claims 14-49 (Previously Cancelled).**

50. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1-1071 of SEQ ID NO:2.

51. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1327-1803 of SEQ ID NO:2.

52. (Previously Amended): An isolated nucleic acid sequence comprising nucleotides 1804-2352 of SEQ ID NO:2.

**Claim 53 (Previously Cancelled).**

54. (Previously Amended): The nucleotide sequence of Claim 50, wherein said sequence encodes a protein having plus-end directed microtubule motor activity.

**Claim 55-56 (Currently Cancelled).**

**Claims 57-58 (Previously Cancelled).**

59. (Previously Added): The nucleic acid sequence of Claim 1, wherein the protein has plus end-directed microtubule motor activity.

**Claim 60-63 (Currently Cancelled).**

64. (Previously Added): An isolated nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.

**Claims 65-67 (Currently Cancelled).**

68. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the encoded protein further comprises amino acids 358 to 442 of SEQ ID NO:1.

**Claims 69-73 (Currently Cancelled).**

74. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is amplified by primer set SEQ ID NO:5 and SEQ ID NO:6 or by primer set SEQ ID NO:5 and SEQ ID NO:7.

75. (Previously Added): The nucleic acid sequence of Claim 74, wherein the protein has plus end-directed microtubule motor activity.

76. (Previously Added): The isolated nucleic acid sequence of Claim 1, wherein the nucleic acid is amplified by the primer set:

5' ATGTCGGCGGTGGAAATATC 3' (SEQ ID NO:3)

5' GAATTCCCTGCTTCGCTGTTTCA 3' (SEQ ID NO:4)

77. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 4~~ a nucleic acid sequence encoding SEQ ID NO:1.

78. (Currently Amended): A host cell transfected with ~~the vector of Claim 77 an expression vector comprising a nucleic acid sequence encoding SEQ ID NO:1.~~

79. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 63 a nucleic acid sequence encoding a protein comprising amino acids 602 to 784 of SEQ ID NO:1, wherein the protein has plus end-directed microtubule motor activity, and wherein the protein specifically binds to polyclonal antibodies to SEQ ID NO:1.~~

80. (Currently Amended): A host cell transfected with ~~the vector of Claim 79 an expression vector comprising a nucleic acid sequence encoding a protein comprising amino acids 602 to 784 of SEQ ID NO:1, wherein the protein has plus end-directed microtubule motor activity, and wherein the protein specifically binds to polyclonal antibodies to SEQ ID NO:1.~~

81. (Currently Amended): An expression vector comprising ~~the nucleic acid sequence of Claim 64 a nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.~~

82. (Currently Amended): A host cell transfected with ~~the vector of Claim 81 an expression vector comprising a nucleic acid sequence encoding a protein comprising amino acids 358 to 442 of SEQ ID NO:1.~~

**Claims 83-88 (Currently Cancelled).**